



# 500 TONS OF WIRE WANTED.

## PROPOSALS ARE INVITED

*By the undersigned, on the part of the NIAGARA FALLS INTERNATIONAL BRIDGE COMPANIES, for the construction of the wire cables of the Railroad Suspension Bridge, of 800 feet span, to be erected over the Niagara river, below the Falls, for the delivery of*

### **One Million of Pounds of Iron Wire,**

*or any portion of it, not less than 100,000 lbs., at the site of the bridge, on the following conditions :*

- 1 The wire is to be of No. 10 size, so that 20 feet will weigh exactly one pound.
- 2 The skeins to weigh no less than 18 lbs. An offer for 30 to 40 lbs. will be greatly preferred.
- 3 The wire must be finished with a lime coat, smooth and even, both ends of the same thickness.
- 4 It must be finished in 3 holes, or nearly as hard as spring-wire.
- 5 The iron must have been manufactured of the best quality of charcoal blooms, which will make hard wire of great elasticity, strength, fibre and toughness.
- 6 The blooms must have been manufactured of cold-blast charcoal pig, and not of anthracite pig, nor of hot-blast pig.
- 7 Satisfactory evidence will be required before hand of the quality of the iron, of which the wire is to be drawn.
- 8 The wire must be drawn on blocks of no less than 2 feet diameter.
- 9 It must be put up in bundles of 200 lbs., as near as can be done, without small skeins.
- 10 The wire is to be delivered in five equal portions during the months of May, June, July, August, and September of next year.
- 11 On delivery the wire will be examined and tested in the following manner:—Of every 5 bundles or 1,000 lbs. one skein will be selected, and suspended between two posts 400 feet apart, the one end attached to a capstan, by which it will be gradually hauled on until it breaks. The condition now is, that this wire must not break with a greater deflection than 9 inches, which is equivalent to 1,300 lbs., or 90,000 per superficial inch of solid wire section. If it stands this test, then further examination of that one thousand pounds, in respect to other qualities, will be continued; but if not, it will be rejected and placed at the disposal of the contractor.
- 12 As regards toughness and fibre, each end of a skein will be tested by bending it square over the jaws of a large pair of new and sharp pliers, and bending it back again. The wire must stand this test without the least sign of failure. Its hardness and elasticity will at the same time be examined by bending and swinging, also by hammering, filing and notching the ends, which forms part of the operation of splicing.
- 13 Such lots as have stood the various tests satisfactorily, will then be accepted conditionally, and 80 per cent of its full value will then be paid to the contractor in bankable funds.
- 14 The 20 per cent will be reserved for four months longer. Should in that time, during the construction of the cables, any more defective skeins be discovered, such skeins will be rejected and placed at the contractor's disposal, either broken or whole, oiled or not oiled, in such condition as they happen to be during the progress of the work. The value of such wire, together with the labor expended upon it, will then be deducted of the 20 per cent reserved.
- 15 The undersigned, as the Engineer of the Bridge, will be the sole judge of the above tests; he will stand as an impartial umpire between the contractor and the Bridge Companies, and from his decision there shall be no appeal.
- 16 Proposals for imported wire will also be accepted. One-half or 500,000 lbs. will be used on the Canada side, and may be bonded, if imported by way of New York.
- 17 Proposals will be received until the 1st October next; they are to be directed to the undersigned at Niagara Falls, N. Y., and should be marked on the envelope, "Proposals for Bridge Wire."
- 18 Those contractors, whose proposals are accepted, will be informed of the fact by mail before or on the 10th October next.

**JOHN A. ROEBLING,**

*Engineer of the Niagara Falls Railroad Suspension Bridge.*

NIAGARA FALLS, N. Y., August 5th, 1852.